Mobile App Programming II Bibliography

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References

[1.1] Metcalf, David, Milliard, Sharlin T.J., Gomez, Melinda, and Schwartz, Michael. Wearables and the internet of things for health: Wearable, interconnected devices promise more efficient and comprehensive health care. *IEEE Pulse*, 7(5):35–39, 2016.

> **Abstract:** The Internet of Things (IoT) and its implementation into wearable smart devices has proven to provide a host of benefits to human lifestyle and health. IoT devices are ushering in a wave of innovation by allowing us to connect nearly any device that we might use on a daily basis to a pervasive smart network that can be controlled from our fingertips. Also, new wearable and embeddable tech makes staying connected even easier and provides great health care benefits. For example, the average user is able to monitor their own health, and health care providers have access to more tools (such as AR) to offer better care. So as long as IoT and wearables remain useful to most users, this emerging technology could certainly be here for the long-term.

[1.2] Nield, David. What is web3 and why should you care? *Gizmodo*, 2021.

> **Abstract:** Web3 is being coined as the evolution of the internet. However, its aim is to take a step back from the over-centralization of the current web (Web 2.0) to the early days of the internet which was more

decentralized. Essentially, striking a balance between Web 1.0 and the current web that is primarily controlled by large corporations. This is done by layering blockchain technology onto the web to allow data transfers to be done on an encrypted network that is not owned nor operated by any central authority. Currently it is too early to tell whether this will be possible to implement in a truly decentralized way and on such a large scale. However, if implemented, it could change the way information moves across the internet forever.

[2.1] Davies, Aran. How to build an investment portfolio app. *DevTeam.Space*, 2019.

Abstract: The market for personal finance applications has been on the rise over the past few years and is expected to continue rising at a compounded annual growth rate of 6.4% from 2017 to 2023. The ease of managing your portfolio and monitoring your spending right from your mobile device has enticed a new generation of investors and people who are less involved with finances to gain more control over their financial goals. In order to create a useful personal finance app, there are a several important steps that must be taken. Some of these include: planning features and a minimum viable product, creating a development roadmap, implementing industry-standard or better APIs for a smooth and secure app experience, team building and organization, etc.

[2.2] Kirkpatrick, Keith. Monetizing your personal data. *Communications of the ACM*, 65(1), 2022.

Abstract: In the modern digital age of the internet, it has become common for most online services that we use in our everyday lives to keep a record of the data that we provide. Large companies such as Google, Facebook, Amazon, etc., all use this data to target advertisements towards us in hopes to get our attention and ultimately turn a profit. In essence, our

data is being traded behind the scenes so that these companies can sell us their products. But what if consumers were the ones in control of the data that was up for sale? While individuals' data is not necessarily all that expensive, giving end users the ability to control which data gets shared could lead to a more fair and trusted internet advertising market. The idea of data brokers would allow for this kind of information exchange and could largely alter our online presence.

[3.1] Kim, Dongyeon, Park, Kyuhong, Park, Yongjin, and Ahn, Jae-Hyeon. Willingness to provide personal information: Perspective of privacy calculus in iot services. *Computers in Human Behavior*, 92:273–281, 2019.

Abstract: The increased development and production of IoT devices has provided many personalized benefits to the average consumer. However, a more personalized experience comes at the expense of more personal information. This study seeks to determine how willing consumers are to provide personal information at the risk of a breach of their own privacy using the privacy calculus theory. Data was collected via a survey of over 150 people with exposure to IoT devices in a few different areas such as healthcare, smart home, and smart transportation. In summary, perceived benefit was met with more people willing to provide personal information, whereas perceived risk did not significantly impact the data. The exception being IoT in healthcare where privacy risk is high, in which case people were less willing to provide personal information despite the less personalized experience.

[3.2] Polkadot.ERI. One article to understand the past, present, and future of web 3.0. *Medium*, 2021.

Abstract: In the early days of the World Wide Web, information and entertainment services such as AOL, Google, and Yahoo were among the most popular and profitable services as the web's user base largely consisted of content consumers. After over a decade of

what was known as Web 1.0, Web 2.0 brought in an era of content creators that share and post content on various platforms such as YouTube, Facebook, Twitter, etc, which continues to exist to this day. Originally, Web 3.0 was to be known as the Semantic Web, where devices would process and share data contextually and conceptually via machine learning, ideally in an IoT style network. Given the rise of blockchain technology, the focus of Web 3.0 has shifted to democratizing and restoring privacy on the internet. While Web 3.0 is still being defined, it has the potential to mitigate the issues with the current web and bring about the perfect internet, where users can be both content consumers and creators without any fear of losing the rights to their digital identity.